T-solution Leader in Electrics & Automation

Starvert iG5A

Economic type intelligent inverter, extended its capability up to 7.5kW

5.5~7.5kW 3 Phase 200~230V, 380~460V

NEW

Automation Equipment

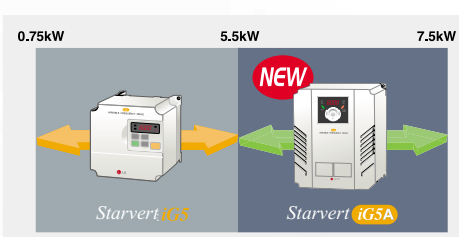
LG Industrial Systems

www.lgis.com

Smart

Release Starvert iG5A

LG Starvert iG5A is very competitive in its price and shows an upgraded functional strength compared to iG5. User-friendly interface, extended inverter ranges up to 7.5kW, superb torque competence and small size of iG5A provides an optimum use environment.



ISO9001 ISO14000

※CE, UL

Easy

Flexibility

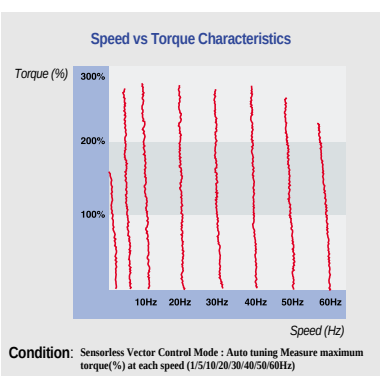
Smart

Sensorless vector control high torque
Built-in sensorless vector control realizes the superb speed control and powerful high torque.

Ground-fault protection function during running
Ground-fault protection of output terminal is possible during running.

Cooling fan control according run pattern
By controlling the cooling fan, iG5A provides a virtually quite environment according motors run and stop.

Auto carrier frequency changes according temperature
When the internal temperature of the inverter increses too high, it is detected and then the inverter control's the carrier frequency automatically.
This function automatically eliminates the temperature increase factor of inverter, thereby it keeps a sounded operation.

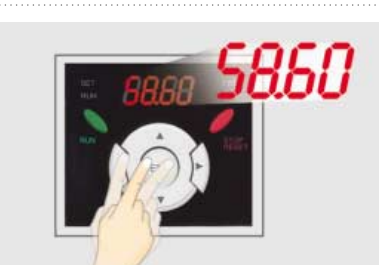


Condition: Sensorless Vector Control Mode : Auto tuning Measure maximum torque(%) at each speed (1/5/10/20/30/40/50/60Hz)

Easy

More convenient interface
The parameter setup became easier by adopting the 4 directions key.

Easy change of the fan
In case of the fan breakdown, it is always changeable by the user as iG5A has been designed to a easy fan changeable structure.



Flexibility

Built-in communication
By the built-in the RS485 LG bus and the Modbus-RTU communications iG5A came to easy application to the communication environment.

Built-in PID control
The built-in process PID function enables controlling the flow-rate,oil-pressure, temperature etc, without any extra controller.

Control from -10V to +10V
Controlling forward and reverse run became possible with inputting voltage signals that ranges from -10V to +10V.

PNP/NPN input
Both PNP and NPN inputs became possible and these enable to use the outer power. To do so, the user will be given wider choices of selecting the controller.

Specifications

■ Rated input/output

SV□□□ iG5A-□			055-2	075-2	055-4	075-4
Motor Note 1		[HP]	7.5	10	7.5	10
		[kW]	5.5	7.5	5.5	7.5
Rated output	Capacity	[kVA] Note 2	9.1	12.2	9.1	12.2
	Current	[A] Note 3	24	32	12	16
	Frequency		0~400 [Hz] Note 4			
	Voltage	[V]	3Phases 200~230V Note 5		3Phases 380~460V Note 5	
Rated input	Voltage	[V]	3Phases 200~230 VAC (+10%, -15%)		3Phases 380~460 VAC (+10%, -15%)	
	Frequency		50~60 [Hz] (±5%)			
Cooling type			Forced cooling			
Weight		(kg)	3.86	4.01	3.86	4.01

Note 1 : The motor capacities were indicated assuming to use 4 poles standard motors.
Note 2 : The rated input voltage for 200V is 220V and 400V is 440V.
Note 3 : Derating is needed when the carrier frequency is setup over 3kHz.
Note 4 : The maximum frequency can not be setup up to 300Hz in case of sensorless vector control.
Note 5 : The maximum output voltage does not rise over rated input voltage and the output voltage can be freely set up unless it exceeds the input voltage.

■ Control

Control type		V/F and sensloress vector
Frequency setup resolution		Digital : 0.01Hz Analog : 0.06Hz (Maximum frequency:60Hz)
Frequency precision		Digital operation : 0.01% of maximum output frequency Analog operation : 0.1% of maximum output frequency
V/F pattern		Linear, square, user V/F
Overload capacity		150%/1Minute
Torque boost		Manual torque boost and auto torque boost
Regenerative braking torque	Maximum brake Time/	20% Note 1 150% with resistor Note 2

Note 1 : 20% torque regenerative refers to the average braking torque of the motor loss which is generated at deceleration stopping.
Note 2 : Please refer to the user manual regarding the braking resistor specification.

■ Operation

Operation type		Selection among loader, terminal, communication, remote loader operations	
Frequency setup		Digital : Loader Analog : 0~10V, -10~+10V, 0~20mA	
Operation function		PID control, up-down operation, 3-wire operation	
Input	P1~P8 Multi function terminal (8points)	NPN/ PNP selection	
		Function : Forward run, reverse run, emergency stop, fault reset, Jog, multi-step frequency-high, middle, low, multi-step deceleration-high, middle,low, DC braking during stop, second motor selection, frequency increase, frequency decrease, 3-wire run, external trip A/B, changing run pattern from PID to normal operation mode	
		Changing run pattern from the option run to main operation mode, analog frequency fix, Selecting during acceleration/decerelation stop	
Output	Multi function open collector terminal	Outputs of the inverter faults or running modes	Below DC 24V 50mA
	Multifunction relay terminal		Below 1 A (N.O, N.C) AC250V, Below 1A DC30V
	Analog output	0~10Vdc (Below 10mA) : Selection among frequency, current, voltage, DC voltage	

■ Protective feature

Trip	Over voltage, low voltage, over current, ground fault current detection, inverter over-heating, motor over-heating, output overload protection, communication error, output phase open, frequency command loss, hardware fault, cooling fan fault
Alarm	Stall prevention, overload
Instant power failure	Below 15msec : Runs without stopping yet both input voltage and output should be within rated value Over 15 Msec: Automatic restart

■ Exterior structure and Environment

Protection	Open type IP20
Ambient temperature	-10℃~50℃
Storage temperature	-20℃~65℃
Ambient humidity	Below 90% RH (Non-condensing)
Altitude, vibration	Below 1000M or 3,300FT . Below 5.9m/sec^2 (0.6G)
Ambient atmospheric pressure	70~106 kPa
Application site	No corrosive gas, combustible gas, oil mist or dust

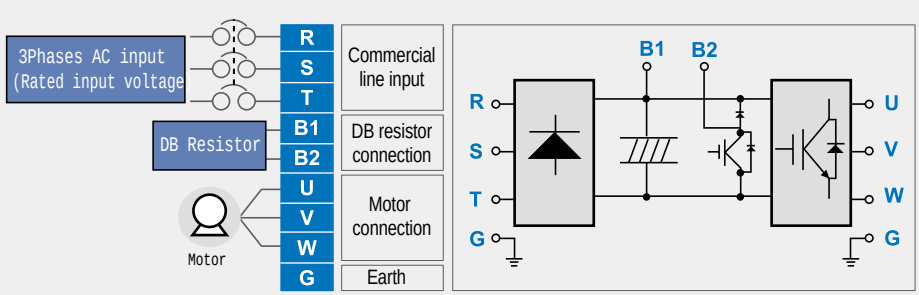
Wiring & Dimension

Wiring

Control terminal

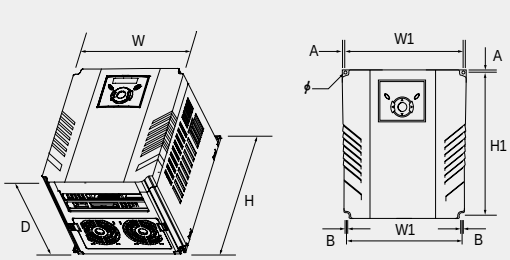
Terminal	Function	
MO	Multi function open-collector output	
MG	MO common	
24	24V ouput /100mA	
P1	Multi function input (initial setup)	FX : Forward run command
P2		RX : Reverse run command
CM	Input signal common	
P3	Multi function input (initial setup)	BX : Emergency stop
P4		JOG : Jog frequency run
P5		RST : Trip release signal
CM	Input signal common	
P6	Multi function input (initial setup)	Multi step frequency-low
P7		Multi step frequency-middle
P8		Multi step frequency-high
VR	10V output terminal for the vloume resistor	
V1	Voltage signal input for frequency setup : -10~+10V	
I	Current signal input for frequency setup : 0~20mA	
AM	Multi function analog output signal : 0~10V	
3A	Multi function relay output	A contact point output
3B		B contact point output
3C		Contact point common
S+	RS485 communication signal connection	
S-		

Power Terminals



Dimension

Inverter	SV055iG5A-2	SV075iG5A-2	SV055iG5A-4	SV075iG5A-4
Capacity [kW]	5.5	7.5	5.5	7.5
W [mm]	180	180	180	180
W1 [mm]	170	170	170	170
H [mm]	220	220	220	220
H1 [mm]	210	210	210	210
D [mm]	170	170	170	170
ϕ [mm]	4.5	4.5	4.5	4.5
A [mm]	5	5	5	5
B [mm]	4.5	4.5	4.5	4.5
Weight [Kg]	3.86	4.01	3.86	4.01



Leader in Electrics & Automation

Safety Instructions

- For your safety, please read user's manual thoroughly before operating.
- Contact the nearest authorized service facility for examination, repair, or adjustment.
- Please contact qualified service technician when you need maintenance.
  Do not disassemble or repair by yourself!
- Any maintenance and inspection shall be performed by the personnel having expertise concerned.

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Specifications in this catalog are subject to change without notice due to continuous product development and improvement.

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